

REMARKS

The application has been reviewed in light of the Office Action dated May 14, 2008. Claims 1-20 are pending and presented for further examination in this application, with claims 1, 3, 9 and 11 being in independent form. By this Amendment, the abstract has been amended to correct informalities, claim 1 has been amended to correct informalities, and claims 9, 11, 15 and 16 have been amended to clarify the claimed invention.

Notice is taken that claims 3-8 are allowed.

The abstract was objected to as having informalities.

The abstract has been reviewed and amended to avoid legal phraseology. A clean copy of the amended abstract is enclosed.

Withdrawal of the objection to the abstract is respectfully requested.

Claim 1 was objected to as having informalities.

Claim 1 has been amended hereinabove to remove the informalities.

Withdrawal of the objection to claim 1 is respectfully requested.

Claims 15 and 16 were rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention.

By this Amendment, claims 15 and 16 have been amended to clarify the claimed invention.

Withdrawal of the rejections under 35 U.S.C. §112, second paragraph is respectfully requested.

Claims 1, 2, and 9-20 were rejected under 35 U.S.C. §102(b) as allegedly anticipated by U.S. Patent No. 4,916,533 to Gillies et al., (hereinafter "Gillies").

Applicants have carefully considered the Examiner's comments and cited art, and respectfully submit that independent claims 1, 9 and 11 are patentable over the cited art for at least the following reasons.

Gillies, as understood by Applicants, is directed to an endoscope insertion direction detecting method that extracts the form of a fold existing on the inside wall of an observed part from an endoscope picture image and judges the endoscope insertion direction on the basis of the form of this fold.

The method described in Gillies includes a first step of extracting discontinuous points in an original picture taken into a computer, a second step of dividing the picture image obtained in the first step into a plurality of picture images and extracting line segment candidates by using a modified Hough conversion from each of the divided picture images, a third step of perceptually grouping the line segment candidates obtained in the second step and extracting the optimum line segment from each of the divided picture images, a fourth step of connecting the line segments obtained in the third step, and a fifth step of determining the insertion direction from the result of the fourth step.

The fourth step in the method described in Gillies was cited in the Office Action as allegedly disclosing the shape-of-range estimating means for estimating the shape of a specified area on the basis of the continuity of the distribution of pixels that indicate the stated pixel value and that are sampled by the pixel sampling means, as provided to the claimed apparatus in independent claim 1 of the present application.

Applicants respectfully disagree.

The fourth step of the method described in Gillies, also referred to as a "connecting of edges" step, involves connecting line segments obtained in the third step of Gillies. Gillies

describes the use of a pyramid quad tree structure to obtain a curve of a fold. However, Gillies simply does not disclose or suggest a shape-of-range estimating means for estimating the shape of a specified area on the basis of the continuity of the distribution pixels that indicate the stated pixel value and that are sampled by the pixel sampling means, as provided in claim 1 of the present application.

Since the cited art does not disclose or suggest each and every feature of the claimed invention, the cited art does not render the claimed endoscope inserting direction detecting apparatus in independent claim 1 unpatentable.

Applicants respectfully submit that independent claims 9 and 11 are patentably distinct from the cited art for at least similar reasons.

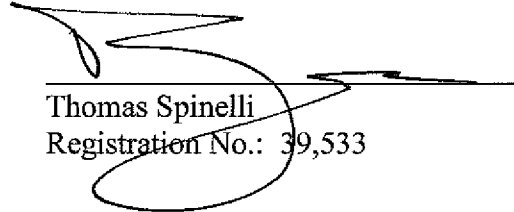
For the above-stated reasons, Applicants respectfully submit that independent claims 1, 9 and 11, and the claims depending therefrom, are patentable over the cited art.

Accordingly, withdrawal of the rejection of claims 1, 2 and 9-20 under 35 U.S.C. §102(b) is respectfully requested.

In view of the amendments to the claims and remarks hereinabove, Applicants submit that the application is now in condition for allowance. Accordingly, Applicants earnestly solicit the allowance of the application.

If the Examiner believes that a telephone conference with Applicants' attorneys would be advantageous to the disposition of this case, the Examiner is asked to telephone the undersigned.

Respectfully submitted,

A handwritten signature in black ink, appearing to be 'Thomas Spinelli', written over a horizontal line. The signature is stylized with a large, sweeping 'S' and a horizontal stroke extending to the right.

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Enclosure (Clean Copy of Amended Abstract)

TS/WC:vh